

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008369**Date Inspected:** 31-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Du Zhi Qun

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**Tower Bay 10**

This QA Inspector observed ZPMC welder Mr. Chen Linghai, stencil 053050 is using is using shielded metal arc procedure WPS-345-SMAW-2G(2F)-Repair to make repairs to tower weld SSD1FESA4-1B/F-7. This weld was recently completed and ZPMC personnel have ground the weld crown smooth and Mr. Linghai is adding weld material to various low areas in the surface of this weld. This QA Inspector observed Mr. Chen Linghai is qualified to make this weld, and the welding electrodes are being stored in a heated oven. ZPMC QC personnel appear to be monitoring the preheating of the base materials and the other welding attributes. Items observed on this date appeared to generally comply with applicable contract documents.

**Tower Bay 11**

ZPMC issued "Inspection Notification Sheet" number 3826 informing QA that ZPMC has completed ultrasonic inspections of west tower lift 1 welds WSD1-A423B/H-3A, WSD1-A115C/J-255A and WSD1-A113E/J-051A

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## WELDING INSPECTION REPORT

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between the doubler diaphragm plate welds. This QA Inspector obtained the assistance of ZPMC CWI Mr. An Qing Ling and ZPMC QC representative Mr. Zhang Jaidi (Ken) in locating these welds. Mr. Zhang Jaidi originally informed this QA Inspector that this inspection request is for the full length of the three welds joining the full length of these tower skin plates, and after Mr. Zhang Jaidi had a discussion with the shop foreman Mr. Zhang Jaidi informed this QA Inspector that the ultrasonic inspections are limited to the portions of the welds between where the double diaphragms are welded on the interior of the tower shaft. Mr. Zhang Jaidi informed this QA Inspector that he is going to cancel item 1 of "Inspection Notification Sheet" number 3826 and he is going to issue a new "Inspection Notification Sheet". Around twenty minutes later Mr. Zhang Jaidi presented Caltrans QA personnel with "Inspection Notification Sheet" number 3830 which lists west tower lift 1 welds WSD1-A423B/H-3A, WSD1-A115C/J-255A and WSD1-A113E/J-051A between the doubler diaphragm plate welds. This QA Inspector performed ultrasonic inspections of approximately 25 percent length of welds WSD1-A115C/J-255A and WSD1-A113E/J-051A and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

ZPMC issued "Inspection Notification Sheet" number 3826 informing QA that ZPMC has completed ultrasonic inspections of fourteen (14) west tower lift 1 backfill plates to the diaphragm (item 2) and the thirty nine (39) west tower lift 1 B/C Corner Beam Diagonal Plate welds (item 3). This QA Inspector obtained the assistance of ZPMC CWI Mr. An Qing Ling and ZPMC QC representative Mr. Zhang Jaidi (Ken) in locating these welds. These welds appear to be located on the interior of the tower shaft. Following discussions between this QA Inspector and Mr. An Qing Ling and Mr. Zhang Jaidi, Mr. Zhang Jaidi informed this Inspector that he is cancelling these portions of the notification due to the uncertainty as to the status of the ZPMC ultrasonic inspections of these welds.

ZPMC issued "Inspection Notification Sheet" number 3829 informing QA that ZPMC has completed ultrasonic inspections of twenty seven lift 2 west corner seam C/D diagonal stiffener splice butt welds. This QA Inspector performed ultrasonic inspections of approximately 30 percent length of the following Lift 2 West corner seam C/C diagonal stiffener splice butt welds: WSD1-TL6K/L-17, WSD1-TL6K/L-19, WSD1-TL6K/L-20, WSD1-TL6K/L-24, WSD1-TL6K/L-25, WSD1-TL6K/L-27, WSD1-TL6K/L-41, WSD1-TL6K/L-43, WSD1-TL6K/L-46, WSD1-TL6K/L-48 and WSD1-TL6K/L-50 and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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